ABSTRACT OF THE DISCLOSURE

A method for determining the best entry point for a percutaneous procedure, such as with a biopsy needle, comprises selecting first and second arbitrary entry points on a patient; determining the three dimensional (3-D) orientation of the needle at the first arbitrary entry point for pointing the needle at the primary target; determining the 3-D orientation of the needle at the first arbitrary entry point for pointing the needle at the secondary target; determining the 3-D dimensional orientation of the needle at the second arbitrary entry point for pointing the needle at the primary target; determining the 3-D orientation of the needle at the second arbitrary entry point for pointing the needle at the secondary target; determining a 3-D line representing the intersection of a first plane containing the first arbitrary entry point, the primary target point, and the secondary target point, and a second plane containing the second arbitrary entry point, the primary target, and the secondary target point, whereby the 3-D line provides a position and orientation for the needle for performing needle biopsy of the primary target through the secondary target.